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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
08/845,897	04/28/1997	M. ASHRAF IMAM	77.897	8846

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EXAMINER

VO, HAI

ART UNIT	PAPER NUMBER
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1771

DATE MAILED: 01/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

08/845,897

Applicant(s)

IMAM ET AL.

Examiner

Hai Vo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 November 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) 5,6,8-10 and 12-16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 7, 11, and 17-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

1. The art rejections over Tsang et al (US 4,605,595) are maintained.
2. The art rejections over Reitz (US 4,759,000) are withdrawn in view of the 09/28/2005 Decision on Appeal.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-4, 7, 11, 19, 22, 23 and 25 are rejected under 35 U.S.C. 102(b) as being anticipated by Tsang et al (US 4,605,595) substantially as set forth in the 09/10/2003 Answer. Tsang discloses an open foam structure comprised of sheets of aluminum which are vacuum impregnated with a slurry of an epoxy resin binder which contains fillers and/or friction modifiers so as to produce a filled foam structure. It appears that nothing in Applicants' specification discloses or suggests the inclusion of additional materials in the foamed polymer layer affect the novel or basic characteristics of Applicants' invention. The absence of fillers or friction modifiers in Application disclosure does not necessarily mean that their presence in the composite article would materially affect the basic and novel characteristics of the claimed invention. Therefore, Applicants bear the burden in establishing that non-recited components materially change the characteristics of Applicants' invention (MPEP 2112; ***In re Delajarte*** 143 USPQ 256) in order to overcome the issues of anticipation. Accordingly, the language

"consisting essentially of" is treated as "comprising" until Applicants provide the evidence in establishing that non-recited components materially change the characteristics of Applicants' invention. Therefore, Tsang anticipates the claimed subject matter.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 17, 18, 20, 21 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsang (US 4,605,595) substantially as set forth in the 09/10/2003 Answer. With regard to claims 17 and 18, Tsang does not specifically disclose pore size or the pore size relationship of the pores of the metal foam. However, it is well-known in the art that the pore size distribution directly effects the properties of the foam. Therefore, it would have been within the level of ordinary skill in the art to have used a uniform pore sized foam, motivated by the desire to obtain a foam having substantially uniform properties along the entire length of the foam. Likewise, it would have been obvious to the skilled artisan to use a foam with gradation of pore sizes, motivated by the desire to obtain a foam with properties that vary along its length.

With regard to claim 20, a laminate containing a plurality of impregnated metal foam sheets is not literally disclosed in Tsang or Reitz. However, the

skilled artisan would have found it obvious to form a laminate containing a plurality of like impregnated metal foam sheets, motivated by the desire to further enhance the properties exhibited by the use of one impregnated metal foam sheet.

With regard to claim 21, Tsang does not specifically disclose the thickness of the metal foam being no less than 3 times the average diameter of the cells. However, such a variable would have been recognized by one skilled in the art as to enhance the compressive and tensile strength of the metal foam. Alternatively, it would have been obvious to the skilled artisan to prepare a metal foam having a smaller average cell diameter, motivated by the desire to have optimized the compressive, flexural, shear and tensile strength of the resulting impregnated foam. As such, in the absence of unexpected results, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have optimized either the thickness of the metal foam or the average cell diameter of the metal foam motivated by the desire to enhance the tensile strength and barrier properties of the metal foam since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

Response to Arguments

7. The art rejections over Tsang (US 4,605,595) have been maintained for the following reasons. Applicants argue that the additional material such as a filler, a

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friction modifier and a reinforcing fiber would displace the polymer, thereby resulting in less polymer being present and less ability for acoustic damping. The arguments are not found persuasive because they are not fully supported by any factual evidence but rather based on Applicants' opinion. As such, the affidavit or evidence needs to be provided in establishing that non-recited components would materially change the characteristics of Applicants' invention to overcome the issues of anticipation or finding of obviousness.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai Vo whose telephone number is (571) 272-1485. The examiner can normally be reached on Monday through Friday, from 6:00 to 2:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (571) 272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

HV

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**HAIVO
PRIMARY EXAMINER**